

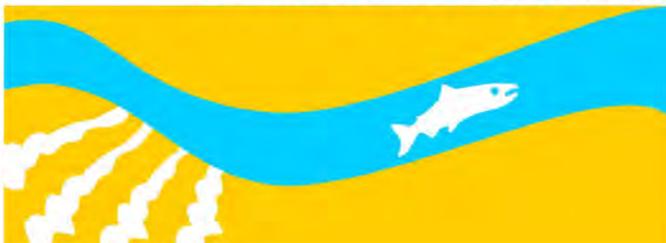
RECLAMATION

Managing Water in the West

Final Environmental Assessment/Initial Study

Arroyo Canal Fish Screen and Sack Dam Fish Passage Project

**SAN JOAQUIN RIVER
RESTORATION PROGRAM**



**U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
Sacramento, California**

February 2013

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MID-PACIFIC REGION
SACRAMENTO, CALIFORNIA**

FINDING OF NO SIGNIFICANT IMPACT

ARROYO CANAL FISH SCREEN AND SACK DAM FISH PASSAGE PROJECT

Recommended: _____ **Date:** _____

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Natural Resources Specialist
San Joaquin River Restoration Program
Mid-Pacific Region**

Concurred by: _____ **Date:** _____

**Stephen Tighe
Project Manager
San Joaquin River Restoration Program
Mid-Pacific Region**

Approved by: _____ **Date:** _____

**Alicia Forsythe
Program Manager
San Joaquin River Restoration Program
Mid-Pacific Region**

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Proposed Action

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) in cooperation with the Henry Miller Reclamation District #2131 (HMRD), proposes to replace Sack Dam and install a new fish screen structure in Arroyo Canal to accommodate fish passage in the San Joaquin River, in accordance with the Stipulation of Settlement (Settlement) in *NRDC, et al., v. Kirk Rodgers, et al.* Federal authorization for implementing the Settlement is provided in the San Joaquin River Restoration Settlement Act (Public Law 111-11).

The Proposed Action includes the following key components:

- Construct a new Sack Dam to accommodate fish passage and improve operational control under the scheduled Restoration Flow regime.
- Demolish the existing Sack Dam structure, and recontour the resulting disturbed channel. Provide stabilization improvements to the east side of the San Joaquin River channel between the east abutment of Sack Dam and the adjacent levee.
- Construct a new 700-cubic-foot-per-second positive barrier fish screen structure within the Arroyo Canal in a single vee configuration with profile bar screens. The fish screen would be designed to meet the criteria and/or recommendations of the guidelines issued by California Department of Fish and Game (DFG) and National Marine Fisheries Service (NMFS).
- Construct a new trash-rack structure at the head of the Arroyo Canal, upstream of the new fish screen structure, with an automated raking mechanism.
- Construct a new transport channel/fish ladder, beginning at the downstream end of the vee screen and terminating at the west abutment of Sack Dam. The transport channel/fish ladder would convey downstream migrating fish and accommodate upstream migrating fish past Sack Dam.
- Construct a defined work bench area adjacent to the west abutment of Sack Dam to facilitate operation and maintenance access to the dam and the Arroyo Canal approach channel.
- Construct a new control building to accommodate mechanical, electrical, and instrumentation and control equipment related to Proposed Action improvements.
- Construct a new equipment storage building to accommodate maintenance equipment related to Proposed Action improvements.
- Replace an existing bridge across the Poso Canal (located immediately north of the Arroyo Canal) to accommodate project operation and maintenance equipment access needs.
- Construct a new bridge across the Poso Canal to facilitate site access from Valeria Avenue during inclement weather conditions. This bridge would also be designed to accommodate project operation and maintenance equipment.

Reclamation posted the draft Environmental Assessment/Finding of No Significant Impact for public review and comment on Reclamation's web site and through a press release that was distributed June 1, 2012. The public review period began June 2, 2012, and ended July 2, 2012.

Findings

In accordance with Section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act of 1969 (40 Code of Federal Regulations Parts 1500-1508), the Mid-Pacific Region of Reclamation finds that the Proposed Action is not a major federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not required for implementing the Proposed Action. This Finding of No Significant Impact is supported by the attached Environmental Assessment/Initial Study, *Arroyo Canal Fish Screen and Sack Dam Fish Passage Project*.

The following factors support this determination, including the implementation of several environmental commitments that are identified below and would be incorporated into the Proposed Action:

1. The Proposed Action would not result in adverse impacts on aesthetics. Construction of the Proposed Action would potentially create short-term and temporary changes in views within the project area. Heavy equipment and machinery is a common visual element in the landscape due to intensive surrounding agricultural operations, and the existence of equipment for construction is not anticipated to significantly affect aesthetics. Aesthetic impacts associated with vegetation removal would be temporary, and a restoration plan would be developed and implemented to revegetate disturbed areas through the implementation of environmental commitment VEG-1, which would help to reduce or eliminate aesthetic impacts. Periodic inspection and maintenance of the fish screen and dam would be similar to existing maintenance activities and would not change the aesthetic characteristics of the area. Equipment storage areas and work areas may be lit for safety purposes and security. Additionally, as described in environmental commitment AES-1, lights would be installed at the lowest allowable height and wattage, and would be screened or directed downward from residences. Therefore, the Proposed Action would have no effect on scenic resources, nor would it create any substantial source of light or glare.
2. The Proposed Action would not result in an adverse impact on air quality. No applicable air quality plan or air quality standard would be violated. The Proposed Action would also not create, exacerbate, or change existing objectionable odors that would affect a substantial number of people. Construction emissions would be below San Joaquin Valley Air Pollution Control District emissions thresholds and are not expected to cause new violations to National Ambient Air Quality Standards (NAAQS), California

Air Quality Standards (CAAQS), or contribute substantially to an existing or projected air quality violation. Long-term operation of the facilities proposed would require minimal trips and use of equipment. Therefore, operation emissions are expected to be minimal and below San Joaquin Valley Air Pollution Control District thresholds, would not result in a violation of NAAQS or CAAQS, and would not contribute substantially to an existing or projected air quality violation.

3. The Proposed Action would result in a beneficial impact on a variety of fish species by allowing uninhibited passage upstream and downstream of Sack Dam. Temporary construction actions would not result in adverse impacts on fish species. Sedimentation and turbidity from project construction would be temporary and limited to a small portion of the river during installation and removal of a temporary cofferdam. Implementation of environmental commitments such as those identified in FSH-5, GEO-1, HM/PH-2, and WR-2, which include the development and implementation of a stormwater pollution and prevention plan, would minimize potential sediment impacts. Pile driving associated with the Proposed Action would occur within dewatered areas within the cofferdam; and therefore, noise levels are anticipated to be below accepted thresholds for fish species. Temporary and short-term impacts on aquatic and riparian habitat would be short-term in nature; and a revegetation plan, specified as the environmental commitment presented in VEG-1, would reduce and offset potential impacts on aquatic and riparian habitat. No hazardous material impacts on fish species would occur due to the implementation of HM/PM-2, which would include the implementation of a stormwater pollution and prevention plan to address potential spill response. The implementation of measures to reduce or avoid turbidity, noise, and vegetation impacts would also result in no adverse impacts on fish related to potential predation from construction or operational activities. Overall, the completion and operation of the project would be beneficial in the long term in serving to provide passage for salmon and other native fish to upstream areas of the San Joaquin River.
4. The Proposed Action would not result in an adverse impact on terrestrial and avian special-status species within the project area. No significant adverse impacts on special-status species are anticipated given the implementation of environmental commitments TER-1 through TER-6. These measures include avoidance and minimization measures that would help to avoid adverse effects on these species. Additionally, the Proposed Action has been developed in such a way that would minimize potential impacts on these species.
5. The Proposed Action would not result in a significant impact on vegetation and wetland resources. Up to 2.4 acres of *Populus fremontii* and *Salix gooddingii* woodland alliances, which are identified as rare natural communities on DFG's (2010) List of California Terrestrial Natural Communities could be removed during construction of the Proposed Action. However, this impact would be lessened given the potential for natural regeneration and the implementation of environmental commitment VEG-1.

Finding of No Significant Impact for Arroyo Canal Fish Screen and Sack Dam Fish Passage Project

Additionally, potential impacts related to nonnative invasive plant species would be avoided by the implementation of environmental commitments VEG-1 and VEG-3, which include a restoration plan for disturbed portions of the San Joaquin River floodplain. Details of the restoration plan, such as seed mix composition, planting areas, and planting densities, would be developed and implemented. Additionally, up to 1.4 acres of jurisdictional waters and wetlands would be permanently removed from the placement of concrete, fill, and metal materials within the ordinary high water mark of the San Joaquin River and Arroyo Canal. Impacts and restoration, including the implementation of VEG-2, would be addressed through the Section 404 and Section 401 permit acquisition process to avoid adverse impacts on wetland resources.

6. The Proposed Action is a federal undertaking triggering the need for compliance with Section 106 of the National Historic Preservation Act. A records search, cultural resources survey, and Tribal consultation resulted in the identification of architectural resources that are being evaluated for their eligibility for listing in the National Register of Historic Places or the California Register of Historic Places. Regardless of their eligibility, the Proposed Action would have no adverse impact on the conveyance system and associated structures because the bridge replacement, and the installation of the fish screen cofferdam and the fish ladder/transport channel would not modify these facilities to the extent that they would no longer continue to function as they have since their original construction – as structures that convey and distribute water. The Proposed Action would require demolition of a storage building that does not appear eligible for listing in the National Register of Historic Places. Environmental commitment CUL-4 would require completion of the Section 106 process prior to the implementation of the ground-disturbing actions that have the potential to have an impact on historical and/or archaeological resources. Reclamation shall undertake Section 106 compliance for all areas of disturbance within the project area, and ensure all historic properties are not adversely affected under the National Historic Preservation Act (36 Code of Federal Regulations Part 800).
7. The Proposed Action would not disproportionately burden minority groups, low-income populations, or Native American Tribes. Potential impacts on minority and low-income populations resulting from implementation of the Proposed Action have been reviewed, and no population, including minority or low-income populations, would bear a disproportionate environmental or human-health effect as a result of the Proposed Action.
8. The Proposed Action would not result in an adverse impact on soils and geologic resources. The Proposed Action would involve substantial earth moving and in-water work to completely remove the existing Sack Dam, regrade approximately 100 feet of river channel between the existing and new dams, and construct the new Sack Dam and associated facilities. Construction of the Proposed Action would also entail the permanent placement of fill material including the new dam, access road and embankment on the east

floodplain, work bench between the new Sack Dam and Poso Canal, and streambank revetments along 25 feet to 100 feet upstream and downstream of the new Sack Dam. The placement of fill material and installation of infrastructure would not affect the quality or functioning of this federally and State-jurisdictional water with the implementation of WR-1. Additionally, best management practices and environmental commitment GEO-1, which have been incorporated into the Proposed Action, would prevent potential adverse soil loss impacts during construction of the Proposed Action.

9. The Proposed Action would not result in a demand for new housing or cause adverse growth-inducing effects. Construction would result in a temporary demand for workers and related support services, but demand for construction labor is expected to be met by the local labor pool.
10. The Proposed Action would not result in adverse impacts on global climate change. The Proposed Action would generate short-term greenhouse gas emissions, which are primarily the result of diesel-powered construction equipment and heavy-duty haul trucks. These emissions are considered short term, because they cease once construction is complete. The estimated emissions range from 396 to 574 metric tons of carbon dioxide equivalent per year and are well below the threshold of 25,000 metric tons of carbon dioxide equivalent per year from construction activities. Also, project operations and maintenance emissions that are primarily the result of electricity usage would result in the generation of very low greenhouse gas emissions. Therefore, the Proposed Action would not create an adverse effect on global climate change.
11. The Proposed Action would not significantly affect known hazards and hazardous material sites, public health, or result in the creation of hazardous materials. Accidental spills of hazardous materials and waste have the potential to occur during construction during routine transportation and use of these materials. Implementation of environmental commitments HM/PH-1 through HM/PH-4 would ensure no adverse impacts associated with hazardous materials. Implementation of environmental commitments HM/PH-5 and HM/PH-6 would ensure no adverse impacts on public health.
12. The Proposed Action would not result in an adverse impact on any Indian Trust Assets as it is outside of the range of Tribal lands held in trust. The nearest Indian Trust Asset is Table Mountain Rancheria, which is approximately 63 miles east of the project area.
13. The Proposed Action would not result in an adverse impact on land use or agricultural resources. The Proposed Action would temporarily result in an impact on approximately 3.4 acres of prime farmland in Fresno County, which accounts for less than 1 percent of the total prime farmland in the county. Additionally, Reclamation and HMRD are working with willing landowners. Once the project has been constructed, all affected farmlands would be restored to their original use; therefore, there would be no adverse impacts on land use as a result of the Proposed Action.

Finding of No Significant Impact for Arroyo Canal Fish Screen and Sack Dam Fish Passage Project

14. The Proposed Action would not result in adverse noise-related impacts. Noise impacts associated with project construction would be short term and would occur only during daylight hours. Fresno County maintains noise standard exemptions for construction noise. Additionally, once constructed, the Proposed Action would not create a substantial permanent increase in ambient noise levels.
15. The Proposed Action would not result in an adverse impact on paleontological resources. It is not expected that in-river construction would encounter paleontological resources, because disturbance would largely be limited to recently deposited sediments. The borrow materials would be expected to be previously disturbed or imported materials. Recent sediments along the river channel have a low potential to contain paleontological resources. Though there is a low potential for paleontological resources to occur, environmental commitment PAL-1 has been incorporated as part of the Proposed Action to ensure no adverse impacts occur to paleontological resources.
16. The Proposed Action would not result in an adverse impact on public services and utilities. There would be no disruption to existing services, nor would the Proposed Action create a significant impact related to power resources necessary to operate the project features. Additionally, environmental commitments PUB-1 and PUB-2 that have been incorporated into the Proposed Action include measures that would ensure that waste generated from project construction activities would not result in an adverse impact on local landfills.
17. The Proposed Action would not result in an adverse impact on recreation, nor would the Proposed Action cause a substantial increase in the demand for recreational facilities. The Proposed Action could potentially increase fish populations upstream of Sack Dam in the San Joaquin River; however, any increase to recreational fishing would occur in pre-project locations and would not result in the expansion or require the construction of recreational facilities.
18. The Proposed Action would not result in an adverse impact on socioeconomic resources. The Proposed Action is anticipated to provide a temporary beneficial impact on the local economy through the creation of construction-associated jobs. The Proposed Action would not result in an impact on existing population and housing trends, employment and labor force trends, prominent business and industry types, and government and finance conditions within the study area.
19. The Proposed Action would not result in an adverse impact on transportation and traffic. During construction there would be a slight increase in traffic to local roadways, with intermittent increases of up to 30 truck trips per day travelling to and from the construction site; however, the increased levels of traffic would be temporary, lasting only during the construction period. Additionally, the Proposed Action incorporates environmental commitments TRAN-1 and TRAN-2, which would ensure that increases in traffic to and from the construction site would not affect current level of service to local

roadways, nor would the Proposed Action create adverse impacts on local traffic and transportation routes.

20. The Proposed Action would not result in an adverse impact on water resources, nor violate water quality standards or waste discharge requirements; nor would the Proposed Action result in disruptions to water deliveries, including wildlife refuges. Environmental commitments WR-1 through WR-3 would minimize potential adverse impacts on water resources.

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List of Abbreviations and Acronyms

CEQA	California Environmental Quality Act
cfs	cubic feet per second
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
EA/IS	Environmental Assessment/Initial Study
FWUA	Friant Water Users Authority
HMRD	Henry Miller Reclamation District #2131
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRDC	Natural Resources Defense Council
Proposed Action	Arroyo Canal Fish Screen and Sack Dam Fish Passage Project
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
Settlement	Stipulation of Settlement in <i>NRDC, et al., v. Kirk Rodgers, et al.</i>
SJR	San Joaquin River
SJRRP	San Joaquin River Restoration Program
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLC	California State Lands Commission
State	State of California
USFWS	U.S. Fish and Wildlife Service
Wyatt	David T. Wyatt

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Section 1 Introduction

Pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), the Department of the Interior, Bureau of Reclamation (Reclamation) and Henry Miller Reclamation District #2131 (HMRD) are jointly preparing this Final Environmental Assessment/Initial Study (EA/IS) for the Arroyo Canal Fish Screen and Sack Dam Fish Passage Project (Proposed Action). This document incorporates by reference the Public Draft EA/IS, Draft Finding of No Significant Impact, and Draft Mitigated Negative Declaration that was issued for public review in June 2012.

In addition to this introduction (Section 1), Section 2 of this Final EA/IS contains copies of comment letters that were received on the Public Draft EA/IS. Section 3 contains responses to the comments, and Section 4 contains the revisions to the text that were identified through review and responses to comments.

1.1 Project Background

In 1988, a coalition of environmental groups, led by the Natural Resources Defense Council (NRDC), filed a lawsuit challenging the renewal of long-term water service contracts between the United States and the Central Valley Project Friant Division contractors. After more than 18 years of litigation of this lawsuit, known as *NRDC, et al., v. Kirk Rodgers, et al.*, a Stipulation of Settlement (Settlement) was reached. On September 13, 2006, the Settling Parties, including NRDC, Friant Water Users Authority (FWUA), and the U.S. Departments of the Interior and Commerce, agreed on the terms and conditions of the Settlement, which was subsequently approved by the U.S. Eastern District Court of California on October 23, 2006. The San Joaquin River Restoration Settlement Act (Public Law 111-11) authorizes and directs the Secretary of the Interior to implement the Settlement.

The San Joaquin River Restoration Program (SJRRP) was established in late 2006 to implement the Stipulation of Settlement. The “Implementing Agencies” responsible for managing the SJRRP include the U.S. Department of the Interior through Reclamation and U.S. Fish and Wildlife Service (USFWS), the U.S. Department of Commerce through the National Marine Fisheries Service (NMFS), the State of California (State) Natural Resources Agency through the California Department of Water Resources (DWR), and California Department of Fish and Game (DFG). The Settlement also stipulates the appointment of a Restoration Administrator, in consultation with a Technical Advisory Committee, to make recommendations to the Secretary of the Interior to help meet the Restoration Goal.

The two primary goals established by the Settlement are as follows:

- **Restoration Goal** – To restore and maintain fish populations in “good condition” in the main stem San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.

- **Water Management Goal** – To reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement.

To achieve the Restoration Goal, the Settlement requires a combination of channel and structural modifications along the San Joaquin River (or SJR) below Friant Dam, releases of water from Friant Dam to the confluence of the Merced River (referred to as Interim and Restoration Flows), and the reintroduction of Chinook salmon. Restoration Flows are specific volumes of water to be released from Friant Dam during different year types, according to Exhibit B of the Settlement (see Table 1). Interim Flows are experimental flows that began in 2009 and will continue until full Restoration Flows are initiated, with the purpose of collecting relevant data concerning flows, temperatures, fish needs, seepage losses, recirculation, recapture, and reuse.

Table 1.
San Joaquin River Restoration Flow Release Schedule (Reach 4)

Month	Water Year Type ¹					
	Critical-Low (cfs)	Critical-High (cfs)	Dry (cfs)	Normal-Dry (cfs)	Normal-Wet (cfs)	Wet (cfs)
October	0	0	115	115	115	115
November 1 through 10	0	175	475	475	475	475
November 11 through 30	0	0	155	155	155	155
December	0	0	155	155	155	155
January	0	0	175	175	175	175
February	0	0	175	175	175	175
March 1 through 15	0	285	285	285	285	285
March 16 through 31	0	1,225	1,225	1,225	1,225	1,225
April 1 through 15	0	0	125	2,180	2,180	2,180
April 16 through 30	0	0	125	125	3,655	3,655
May	0	0	85	85	85	1,650
June	0	0	85	85	85	1,650
July	0	0	45	45	45	45
August	0	0	45	45	45	45
September	0	0	65	65	65	65

Note:

¹ Restoration Flow release schedule, as documented in Exhibit B of the Settlement.

Key:

cfs = cubic feet per second

To achieve the Water Management Goal, the Settlement calls for recirculation, recapture, reuse, exchange, or transfer of the Interim and Restoration Flows to reduce or avoid impacts on water deliveries to all of the Friant Division long-term contractors caused by the Interim and Restoration Flows.

Barriers to migration for anadromous and other fish in SJR encompass a wide range of both adult and juvenile passage impediments. Fish passage in the river has been essentially blocked since the 1940s, and upstream diversions have resulted in the river being dewatered in several portions of the river under dry to normal conditions, with the exception of return flows from agricultural operations and uncontrolled flow releases in wet years. The Settlement requires the restoration of flows to SJR, improvements in fish passage at a number of structures, and actions to prevent fish entrainment at certain structures and sloughs. The Fisheries Management Plan identifies a number of potential actions, consistent with those recommended in the Settlement, to provide fish passage, including the retrofit of Sack Dam, and to reduce entrainment, including the screening of Arroyo Canal.

The Settlement-required improvements at the Arroyo Canal and Sack Dam facilities are proposed to be designed, built, and operated in accordance with Public Law 111-11 and the Memorandum of Understanding between Reclamation and HMRD.

1.2 Proposed Action

Reclamation in cooperation with HMRD, proposes to replace Sack Dam and install a new fish screen structure in Arroyo Canal to accommodate fish passage in the San Joaquin River, in accordance with the Settlement. Federal authorization for implementing the Settlement is provided in the San Joaquin River Restoration Settlement Act (Public Law 111-11).

The Proposed Action includes the following key components:

- Construct a new Sack Dam to accommodate fish passage and improve operational control under the scheduled Restoration Flow regime.
- Demolish the existing Sack Dam structure, and recontour the resulting disturbed channel. Provide stabilization improvements to the east side of the San Joaquin River channel between the east abutment of Sack Dam and the adjacent levee.
- Construct a new 700-cubic-foot-per-second positive barrier fish screen structure within the Arroyo Canal in a single vee configuration with profile bar screens. The fish screen would be designed to meet the criteria and/or recommendations of the guidelines issued by DFG and NMFS.
- Construct a new trash-rack structure at the head of the Arroyo Canal, upstream of the new fish screen structure, with an automated raking mechanism.
- Construct a new transport channel/fish ladder, beginning at the downstream end of the vee screen and terminating at the west abutment of Sack Dam. The transport channel/fish ladder would convey downstream migrating fish and accommodate upstream migrating fish past Sack Dam.

- Construct a defined work bench area adjacent to the west abutment of Sack Dam to facilitate operation and maintenance access to the dam and the Arroyo Canal approach channel.
- Construct a new control building to accommodate mechanical, electrical, and instrumentation and control equipment related to Proposed Action improvements.
- Construct a new equipment storage building to accommodate maintenance equipment related to Proposed Action improvements.
- Replace an existing bridge across the Poso Canal (located immediately north of the Arroyo Canal) to accommodate project operation and maintenance equipment access needs.
- Construct a new bridge across the Poso Canal to facilitate site access from Valeria Avenue during inclement weather conditions. This bridge would also be designed to accommodate project operation and maintenance equipment.

Reclamation posted the Public Draft joint EA/IS and associated Finding of No Significant Impact (FONSI) for public review and comment on Reclamation's web site and through a press release that was distributed June 1, 2012. HMRD submitted the public draft joint EA/IS and associated Mitigated Negative Declaration (MND) to the California State Clearinghouse on June 4, 2012. The public review period began June 2, 2012, and ended July 3, 2012.

Subsequent to the release of the public draft EA/IS, potential issues associated with subsidence in the project area, including at the current and proposed Sack Dam sites, have prompted additional review of project features and design. At present, it is anticipated that any necessary refinements to the project design would not result in any significant impacts not identified in this EA/IS. If additional design changes are determined to be warranted that could result in potential additional impacts not addressed in this EA/IS, Reclamation and HMRD would prepare and issue an addendum and/or supplemental environmental document to disclose such impacts as necessary.

Section 2 Comments

This section contains copies of comment letters received from agencies and organizations. Table 2 indicates the commenting entity and abbreviation used to identify commentors. Individual comments within a comment letter are delineated by the abbreviation and sequential number (for example, USACE-1). Responses to comments are provided in Section 3, Responses to Comments, of this Final EA/IS and are numbered corresponding to the numbers assigned in the letter. Modifications to the Public Draft EA/IS are included in Section 4, Errata, of this Final EA/IS.

**Table 2.
Comment Letters Received and
Abbreviations Used to Identify Commentors**

Abbreviation	Agency	Affiliation
USACE	U.S. Army Corps of Engineers	Federal Agency
DFG	California Department of Fish and Game	State Agency
SLC	California State Lands Commission	State Agency
SJVAPCD	San Joaquin Valley Air Pollution Control District	Local Agency
Wyatt	David T. Wyatt	Individual

2.1 Comments from U.S. Army Corps of Engineers



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

June 29, 2012

Regulatory Division (SPK-2011-00873)

Michelle Banonis
Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, California 95825

Dear Ms. Banonis:

We are responding to your request for comments on the Draft Environmental Assessment/Initial Study and Finding of No Significant Impact/Mitigated Negative Declaration for the Arroyo Canal Fish Screen and Sack Dam Fish Passage Project dated June 1, 2012. This 20.4-acre project is located in Section 12, Township 11 South, Range 13 East, MDB&M, Latitude 36.9834179117563°, Longitude -120.500552746692°, in the San Joaquin River at River Mile 182, Madera and Fresno Counties, California. This project is also located within Arroyo Canal and Poso Canal.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, some canals, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work. The Corps of Engineers' also has jurisdiction over this project under Section 10 of the Federal Rivers and Harbors Act. This regulation requires authorization from our office prior to any work occurring within the navigable waters of the United States.

USACE-1

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States mitigation shall be required to compensate for the unavoidable losses resulting from project implementation.

USACE-2

There are noticeable locations within this document where the Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act are not mentioned. Please revise the document to ensure that the requirements of the Rivers and Harbors Act are always met. This document states that the projected impacts to waters of the United States shall be up to 1.4 acres;

-2-

however, the document also states that no impacts shall occur to Poso Canal. Yet, in previous discussions with your office, impacts to Poso Canal have been identified. Please revise this document to adequately identify all impacts to waters of the United States that shall occur for the construction of this project.

USACE-3

As a cooperating agency, the Corps of Engineers must be included with the creation of the revegetation plan and long-term care of this project. Additionally, because the San Joaquin River and the initial section of the Arroyo Canal are regulated under Section 10 of the Federal Rivers and Harbors Act any work, including the future maintenance work of sediment removal, below the Ordinary High Water Mark requires authorization from our office prior to initiation. (See Page 3-125.)

We appreciate the efforts you have made to reduce the amount of impacts to waters of the United States with the design of this project. Please refer to identification number SPK-2011-00873 in any correspondence concerning this project. If you have any questions, please contact me at the letterhead address, Room 1350, email Kathy.Norton@usace.army.mil, or telephone 916-557-5260. For more information regarding our program or to take a customer survey, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Kathy Norton
Sr. Project Manager
California South Branch

Copy Furnished:

Mark Littlefield, U.S. Fish and Wildlife Service, 2800 Cottage Way, W-2605, Sacramento, California 95825-1888

Leslie Mirise, National Marine Fisheries Service, 650 Capitol Mall, Suite 5-100, Sacramento, California 95814-4718

2.2 Comments from California Department of Fish and Game



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
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EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director



July 2, 2012

Chase Hurley
Henry Miller Reclamation District #2131
11704 Henry Miller Avenue
Dos Palos, California 93620

**Subject: Public Environmental Assessment/Initial Study and Finding of No Significant Impact/Mitigated Negative Declaration (EA/MND)
Arroyo Canal Fish Screen and Sack Dam Fish Passage Project
SCH No. 2012061008**

Dear Mr. Hurley:

The California Department of Fish and Game (Department) has reviewed the EA/MND prepared by the United States Department of the Interior Bureau of Reclamation (BOR) in cooperation with Henry Miller Reclamation District #2131 (HMRD) for the Arroyo Canal Fish Screen and Sack Dam Fish Passage Project (Project) located on the San Joaquin River, approximately 7 miles southeast of Dos Palos in Fresno and Madera counties. The Project is associated with the San Joaquin River Restoration Program (SJRRP) whose purpose is to restore the San Joaquin River and reintroduce Chinook salmon. Approval of the Project would allow for the following:

- Construction of a new Sack Dam
- Demolition of existing Sack Dam and recontour disturbed channel
- Construction of a fish screen structure on Arroyo Canal
- Bank stabilization improvements on the eastside of the San Joaquin River
- Construction of a trash rack structure at the head of Arroyo Canal
- Construction of a fish transport channel/fish ladder
- Construction of a new work bench on the west abutment of Sack Dam
- Construction of control building and equipment building
- Replacement of an existing bridge across the Poso Canal
- Construction of a new bridge across Poso Canal

Conserving California's Wildlife Since 1870

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The EA/MND also includes and analyzes a vertical slot fish ladder and fish bypass system alternative and a no action alternative. The construction activities would last from January 2013 to October 2014. Three staging areas were identified on-site within the Project area as well as three borrow sites. One borrow site was identified as the Arroyo Canal levee road and two additional borrow sites were discussed as off-site property owners or off-site quarries. Site access is limited to the west side of the San Joaquin River via Valeria Avenue and a low flow crossing will be constructed across the San Joaquin River to allow east side access.

The Department is concerned that this Project has the potential to significantly impact multiple sensitive wildlife resources known to occur in the Project area or its vicinity. We recommend that the HMRD evaluate and develop measures that will avoid, minimize, and mitigate potential Project-related impacts to sensitive biological resources. The Department is particularly concerned that construction activities could result in impacts to special-status species known to occur in the Project area including, but not limited to, the State threatened Swainson's hawk (*Buteo swainsoni*), State fully protected white-tailed kite (*Elanus leucurus*), State Species of Special Concern northern harrier (*Circus cyaneus*), State Species of Special Concern loggerhead shrike (*Lanius ludovicianus*), State Species Special of Concern western burrowing owl (*Athene cunicularia hypugea*), State Species Special of Concern western red bat (*Lasiurus blossevillii*), State Species of Special Concern western pond turtle (*Actinemys marmorata*), federally and State threatened giant garter snake (*Thamnophis gigas*), federally threatened green sturgeon (*Acipenser medirostris*), federally and State threatened spring-run Chinook salmon (*Oncorhynchus tshawytscha*), and federally threatened steelhead (*Oncorhynchus mykiss*). Our specific comments follow.

Department Jurisdiction

Trustee Agency Authority: The Department is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact plant and wildlife resources. Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used under CEQA (Division 13 [commencing with Section 21000] of the Public Resources Code).

In general, CEQA requires that for each significant impact identified, feasible measures to avoid or substantially reduce the Project's significant environmental effect must be

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discussed. The CEQA Guidelines (Section 15370) provide for five categories of mitigation; measures that avoid, minimize, rectify, reduce or eliminate, or compensate for the significant environmental effect of the proposed Project. To be considered adequate, mitigation measures should be specific, feasible actions that will actually improve adverse environmental conditions and should be measurable to allow monitoring and enforcement of their implementation. These measures should be clearly defined in the CEQA document and not mentioned as an attachment.

Responsible Agency Authority: The Department has regulatory authority over projects that could result in the "take" of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code Section 2081. If the Project could result in the "take" of any species listed as threatened or endangered under the California Endangered Species Act (CESA), the Department may need to issue an Incidental Take Permit (ITP) for the Project. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (sections 21001(c), 21083, Guidelines sections 15380, 15064, 15065). Impacts must be avoided or mitigated to less than significant levels unless the CEQA Lead Agency makes and supports a Statement of Overriding Consideration (SOC). The CEQA Lead Agency's SOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code Section 2080. The Project has the potential to reduce the number or restrict the range of endangered, rare, or threatened species (as defined in Section 15380 of CEQA).

Fully Protected Species: The Department has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code Sections 3511, 4700, 5050, and 5515. "Take" of any fully protected species is prohibited and the Department cannot authorize their "take".

Bird Protection: The Department has jurisdiction over actions which may result in the disturbance or destruction of active nest sites or the unauthorized "take" of birds. Fish and Game Code sections that protect birds, their eggs, and nests include sections 3503 (regarding unlawful "take," possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the "take," possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful "take" of any migratory nongame bird). Appropriate avoidance and minimization measures for raptors and other nesting birds in the Project area should be included in the CEQA document prepared for this Project.

Stream Alteration Agreement (SAA): The Department also has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 et seq. Project

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activities identified within the EA/MND require working within the bed, bank, and channel of State jurisdictional waters. The Project proponent has submitted a Stream Alteration Notification and the Project proponent should comply with the Stream Alteration Agreement (SAA) required for the proposed activities. The Department is required to comply with CEQA in the issuance or the renewal of an SAA.

Project Comments

DFG-1

Swainson's Hawk (SWHA): SWHA nests have been documented within 200 feet of the Project area. To avoid impacts to the species, surveys should be conducted following the survey methodology developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000), prior to beginning ground disturbance. These surveys, the parameters of which were designed to optimize detectability, should be conducted to reasonably assure the Department that "take" of this species will not occur as a result of disturbance associated with Project implementation. In the event that this species is detected during protocol-level surveys, the Department recommends a ½-mile no-disturbance buffer be established. If implementation of the ½-mile no-disturbance buffer is not feasible or the potential for "take" cannot be avoided, then consultation with the Department is warranted to discuss the acquisition of a State ITP prior to any ground-disturbing activities.

Removal of mature trees is a potentially significant impact to nesting raptors that should be mitigated. The Department considers removal of known raptor nest trees, even outside of the nesting season, to be a significant impact under CEQA, and, in the case of SWHA, it could also result in "take" under CESA. This is especially true with species such as SWHA that exhibit high site fidelity to their nest and nest trees year after year. Regardless of nesting status, trees that must be removed should be replaced with an appropriate native tree species planting at a ratio of 3:1 in an area that will be protected in perpetuity. This mitigation is needed to offset potential impacts to the loss of potential nesting habitat. The Department notes that mitigation measure TER-2 in the draft MND is consistent with all of the above avoidance and minimization recommendations.

DFG-2

Burrowing Owl: Potential burrowing owl habitat was identified during reconnaissance-level surveys conducted on the Project site in April 2011. To avoid impacts to the species, focused surveys should be conducted following the survey methodology developed by the California Burrowing Owl Consortium (CBOC, 1993). If any ground-disturbing activities will occur during the burrowing owl nesting season (approximately February 1 through August 31), and potential burrowing owl burrows are present within the Project footprint, implementation of avoidance measures are warranted. In the event that burrowing owls are found, the Department's Staff Report on Burrowing Owl Mitigation (CDFG 2012) (Staff Report) recommends that impacts to

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occupied burrows be avoided by implementation of a no-disturbance buffer zone of between 50 to 500 meters depending on Project activities and season, or unless a qualified biologist approved by the Department verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Failure to implement this buffer zone could cause adult burrowing owls to abandon the nest, cause eggs or young to be directly impacted (crushed), and/or result in reproductive failure, in violation of Fish and Game Code and the Migratory Bird Treaty Act.

If the Project proposes to evict burrowing owls that may be present, the Department recommends passive relocation during the non-breeding season. The CEQA document should specify how the impact of evicting owls would be mitigated to a less than significant level. The Department recommends that foraging habitat be acquired and permanently protected to offset the loss of foraging and burrow habitat. The Department also recommends replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1:1) as mitigation for the potentially significant impact of evicting a burrowing owl.

DFG-3

Other Nesting Birds: Nesting birds have the potential to exist on the Project site. If Project-related activities must occur during the breeding season (February through mid-September), surveys for active nests should be conducted by a qualified biologist no more than 30 days prior to commencing Project-related activities. A minimum no-disturbance buffer of 250 feet should be delineated around active nests of songbirds and 500 feet around active nests of non-listed raptors until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. If the active nest of a listed or fully protected species is discovered, no construction activities should commence until after consultation with the Department and implementation of appropriate avoidance measures on the ground.

Mitigation measures TER-4 and TER-5 in the draft MND, if implemented in tandem with the above no-disturbance buffers, is consistent with Department recommendations for reducing any potential impacts to nesting birds to less than significant.

DFG-4

San Joaquin Kit Fox (SJKF): As stated in the EA/MND, there is one SJKF occurrence within 5 miles of the Project area documented in 2010. SJKF populations are known to den in right-of-ways, vacant lots, parks, landscaped areas, golf courses, etc., and population numbers fluctuate over years. It is important to note that presence/absence in any one year is not indicative of the potential for kit fox to occur on a site. This is true for many other listed species in the San Joaquin Valley. SJKF are also attracted to

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construction and disposal areas due to the type and level of activity (grading, excavation, staged pipeline, etc.) and the loose, friable soils that are created as a result of intensive ground disturbance. The Department recommends having a qualified biologist conduct focused surveys for potential, known, atypical, and active kit fox dens on the entire Project site and follow the United States Fish and Wildlife Service (USFWS) "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011). A pre-construction survey is also recommended. In the event that this species is detected during surveys, consultation with the Department is warranted to discuss how to implement the Project and avoid "take," or if avoidance is not feasible, to acquire a State ITP prior to any ground-disturbing activities. Mitigation measures for SJKF should be fully addressed in the CEQA document prepared for the Project.

DFG-5

The Department also recommends consulting with the USFWS on potential impacts to this species. "Take" under the Federal Endangered Species Act (FESA) is more stringently defined than CESA; "take" under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of Project implementation.

DFG-6

Special-status Fish: The Department is concerned that the Project could have a potentially significant impact on migrating special-status fish within the San Joaquin River. As stated in the maintenance section of the document (Section 2.4 Proposed Action/Preferred Alternative Post-Construction Operation and Maintenance Requirements), routine inspection of the fish screen and trash rack would require dewatering the fish screen structure during December and January. The Department notes the time interval during which dewatering would occur is not stated. Depending on the duration, the Department has concerns this maintenance at the proposed timing could potentially impact migrating special status fish species such as Central Valley Steelhead (*Oncorhynchus mykiss*) or late fall-run/fall-run Chinook salmon (*Oncorhynchus tshawytscha*). The EA/MND should include mitigation for fish screen maintenance including restricting maintenance to seasonal low-flow periods in the river which would essentially inhibit fish migration or restrict activities temporally to outside of the anadromous fish migration periods. Regular maintenance and dewatering of the Fish Screen would require a Streambed Alteration Agreement, Fish Rescue Plan, and Dewatering Plan. To ensure compliance with state and federal regulations, Fish Rescue Plans should be coordinated with the National Marine Fisheries Service and the Department. Additionally, maintenance activities may potentially impact other sensitive species, such as nesting raptors, and should be avoided or minimized through

DFG-7

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scheduling work during non-nesting season (September-February) or adhering to the appropriate no-disturbance buffers.

DFG-8

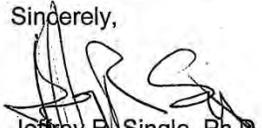
The draft MND states in Impact FSH-8 that released juvenile spring-run Chinook salmon associated with SJRRP reintroductions would be transported via trap and haul around the Project area during construction, the reference stated (USFW 2011a) was not included in the References section and therefore could not be verified. Reintroductions of spring-run Chinook salmon are scheduled to begin December 31, 2012; however, reintroduction methods, which include trap and haul and direct San Joaquin River releases, have not been finalized. Mitigation measures should be integrated into the EA/MND to provide for out-migration through the Project area if juvenile spring-run Chinook are released directly into the San Joaquin River.

DFG-9

Federal Endangered Species Act: If biological surveys result in the detection of federally listed species or their habitat, survey results should be submitted to the United States Fish and Wildlife Service who has jurisdiction over species listed under the Federal Endangered Species Act.

We appreciate the opportunity to provide comments on this project. If you have any questions on these issues, please contact Benessa Espino, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014, extension 274, or by electronic mail at bespino@dfg.ca.gov.

Sincerely,



Jeffrey R. Single, Ph.D.
Regional Manager

cc: See Page Six

Chase Hurley
July 2, 2012
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United States Fish and Wildlife Service
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California Department of Fish and Game

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Literature Cited

CBOC. 1993. Burrowing Owl Survey Protocol and Mitigation Guideline. The California Burrowing Owl Consortium.

CDFG. 2012. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game, March 2012.

SWHA TAC. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee.

USFWS. 2011. U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. Sacramento Fish and Wildlife Office.

2.3 Comments from California State Lands Commission

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DEPM

PAGE 01/08

STATE OF CALIFORNIA

EDMUND G. BROWN JR., Governor

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



CURTIS L. FOSSUM, Executive Officer
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June 28, 2012

Contact Phone: (916) 574-1900
Contact FAX: (916) 574-1886

File Ref: SCH # 2012061008

Henry Miller Reclamation District # 2131
Attn: Chase Hurley
11704 Henry Miller Ave.
Dos Palos, CA 93620

*2/3/12
CLEAR*

Subject: Environmental Assessment/Initial Study/Finding of No Significant Impact/Mitigated Negative Declaration (EA/IS/FONSI/MND) for Arroyo Canal Fish Screen and Sack Dam Fish Passage Project, San Joaquin River/Arroyo Canal, Fresno/Madera County

Dear Mr. Hurley:

The California State Lands Commission (CSLC) staff has reviewed the subject EA/IS/FONSI/MND for Arroyo Canal Fish Screen and Sack Dam Fish Passage Project (Project), which is being prepared by Henry Miller Reclamation District # 2131 (HMRD). HMRD, as a public agency proposing to carry out the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and the U.S. Bureau of Reclamation (USBR) is the lead agency under the National Environmental Policy Act (NEPA). The CSLC is a trustee agency because of its trust responsibility for projects that could directly or indirectly affect sovereign lands, their accompanying Public Trust resources or uses, and the public easement in navigable waters. Additionally, as the Project involves work on sovereign lands, the CSLC will act as a responsible agency.

CSLC Jurisdiction and Public Trust Lands

The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The CSLC also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On navigable non-tidal waterways, such as the San

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Joaquin River (SJR), the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust Easement landward to the ordinary high water mark, except where the boundary has been fixed by agreement or court decision. Such boundaries may not be readily apparent from present day site inspections.

Based upon staff's review of our in-house records and maps, the SJR at the Project location is natural but subject to artificial conditions, navigable, non-tidal, and meandered on both banks on the United States Township Plat. The uplands (the area between the United States meander lines and the SJR) are located within lands the State acquired and patented as S&O Survey 279 (Fresno County) on the left (west) bank and S&O Survey 280 (Fresno County) on the right (east) bank. The Poso Canal at this location appears to be artificial waterways cut from S&M Survey 279 (Fresno County). There is some evidence that the Arroyo Canal was formerly a natural waterway, but at the present time there is no evidence that it is currently in a navigable condition.

SLC-1

A lease will be required for the portion of the Project that is within the SJR. A lease application may be found on our website at www.slc.ca.gov. The Project components located within the Poso Canal and Arroyo Canal do not require a lease from the CSLC at this time.

This conclusion is without prejudice to any future assertion of State ownership or public rights, should circumstances change, or should additional information become available. This letter is not intended, nor should it be construed as, a waiver or limitation of any right, title, or interest of the State of California in any lands under its jurisdiction.

Project Description

The facilities are located in Fresno/Madera County, approximately 7 miles southeast of Dos Palos, and are owned and operated by HMRD. The Project involves removing and rebuilding the existing Sack Dam (Dam), which is on the SJR, just north of Arroyo Canal, 100 feet upstream near the Arroyo Canal divergence. The Poso Canal runs perpendicular to Arroyo Canal and parallel to the SJR. Key components of the proposed Project are the following:

- Construct a new Dam to accommodate fish passage and improve operational control.
- Demolish the existing Dam structure, and recontour the resulting disturbed channel. Provide stabilization improvements to the east side of the SJR channel between the east abutment of Dam and the adjacent levee.
- Construct a new 700 cubic feet per second (cfs) positive barrier fish screen structure within Arroyo Canal in a single vee configuration with profile bar screens meeting the criteria and/or recommendations of guidelines issued by the California Department of Fish and Game (CDFG) and National Marine Fisheries Services.

- Construct a new trash-rack structure at the head of the Arroyo Canal, upstream of the new fish screen structure, with an automated raking mechanism.
- Construct a new transport channel/fish ladder, beginning at the downstream end of the vee screen and terminating at the west abutment of Dam. The transport channel/fish ladder would convey downstream migrating fish and accommodate upstream migrating fish past the Dam.
- Construct a defined work bench area adjacent to the west abutment of the Dam to facilitate operation and maintenance access to the Dam and Arroyo Canal approach channel.
- Construct a new control building to accommodate mechanical, electrical, and instrumentation and control equipment related to Project improvements.
- Construct a new equipment storage building to accommodate maintenance equipment related to Project improvements.
- Replace an existing bridge across the Poso Canal (located immediately north of Arroyo Canal) to accommodate Project operation and maintenance equipment access needs.
- Construct a new bridge across Poso Canal to facilitate site access from Valeria Avenue during inclement weather conditions and accommodate Project operation and maintenance equipment.

The proposed Project is based on the San Joaquin River Restoration Settlement Act (Public Law 111-11) (Settlement) authorizing and directing the Secretary of the Interior to implement it through the following primary goals:

- Restoration Goal. Requires a combination of channel and structural modifications along the SJR below Friant Dam, release of water from Friant Dam to the confluence of Merced River, and the reintroduction of Chinook salmon.
- Water Management Goal. Requires recirculation, recapture, reuse, exchange, or transfer of the interim and restoration flows to reduce or avoid impacts on water deliveries to all of the Friant Diversion long-term contractors caused by the interim and restoration flows.

In the interest of all Public Trust values of the sovereign land underlying the SJR, CSLC staff offers the following comments and requests that USBR and HMRD consider these comments and suggestions when preparing the final EA/IS/FONSI/MND.

Environmental Review

Project Description

SLC-2

1. CSLC staff is concerned that the EA/IS/FONSI/MND does not include sufficiently detailed information related to procedures for different stages of construction to fully understand potential impacts from the Project. For example, under the "Sack Dam Replacement" section on page 2-3 (June 2012), it states "The Proposed Action

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includes removing the existing dam and constructing a new dam approximately 100 feet upstream, near the Arroyo Canal...." In this example, the construction and deconstruction phases' equipment operation needs and timing are inadequate to allow comprehensive independent evaluation of Project impacts. CSLC staff recommends clearly laying out all stages of construction phases, timing, and equipment needs with additional details. Also, the EA/IS/FONSI/MND would benefit from clearly stating all efforts aimed at minimizing contamination of the SJR from construction-related activities by building temporary structures such as cofferdams.

SLC-3

2. Demolition of Existing Dam. The EA/IS/FONSI/MND on page 2-4 (June 2012) explains that the existing dam will be removed and a new dam will be constructed approximately 100 feet upstream. However, it is unclear how and when decommissioning would occur. The EA/IS/FONSI/MND would benefit from providing adequate explanation on ensuring decommissioning of the old intakes to prevent further water diversions from the SJR resulting in lowering water flows downstream. Low water levels may result in increased water temperatures in the streams resulting in possible impacts to fish and other public trust resources and values.

CEQA Checklist

SLC-4

3. The EA/IS/FONSI/MND in Section 3.0 "Affected Environmental Consequences" does not include a CEQA Checklist (Checklist) for each of the environmental issues discussed. The EA/IS/FONSI/MND would benefit from including a Checklist at the beginning of Section 3.0 for environmental issues such as aesthetics, air quality, etc. Then, the Aesthetics portion of the Checklist should be included at the beginning of Aesthetics section on page 3-1 (June 2012), etc. CSLC staff also requests that the EA/IS/FONSI/MND clearly explain the current thresholds and the clear and logical discussions leading to the conclusions of the impacts being less than significant, significant with mitigation, or potentially significant.

Biological Resources

SLC-5

4. Special Status Species. The discussions regarding special status species may be insufficient in that they do not provide enough detailed logic for determining the level of impacts. For example, the EA/IS/FONSI/MND on page 3-23 (June 2012) explains that at least four of the eight listed special status species (Table 3.3-2) are expected to be in the Project area because of their habitats. However, no proposed mitigation measures are mentioned even after listing at least 12 impacts to fish species in this section. Moreover, the listed impacts are stated to be less than significant or beneficial for species without much clear and logical reasoning for reaching these conclusions.

For example, Impact FSH-5 on page 3-30 (June 2012) states: "The removal of riparian habitat via bank revetment would temporarily discontinue recruitment of small and large pieces of in-stream woody material." However, large pieces of these instream woody materials would reduce the potential for creation of adult immigration and holding habitat, including deep pools. small pieces would reduce

juvenile salmonid rearing habitat. Furthermore, the EA/IS/FONSI/MND on page 3-31 (June 2012) appears to disregard the impacts mentioned above because of the Project's occurring only for a short duration extending through construction period; specifically, the EA/IS/FONSI/MND states that such impacts will be of a "...temporary nature of altering the aquatic and riparian habitat in the study area, this impact would be less than significant."

The CSLC staff requests detailed, logical, and clear discussions throughout these sections explaining why the possible impacts of the proposed Project are considered to be less than significant. CSLC staff also recommends proposing possible mitigation measures if impacts reach higher thresholds than what may be currently considered less than significant. The EA/IS/FONSI/MND would also benefit from discussions related to required permits for special status species like Incidental Take Permit (ITP) from CDFG. An ITP permit is required if expected to take any state listed threatened or endangered species. Therefore, CSLC staff recommends early consultations with CDFG and other appropriate agencies.

5. Underwater Noise and Vibration. The EA/IS/FONSI/MND does not appear to directly address underwater noise and vibration, which is discussed on page 3-108 (June 2012):

SLC-6

"The site preparation phase typically generates the highest noise levels, which are caused by onsite equipment associated with grading, compacting, and excavation, as well as vibratory hammers and/or impact hammers during installation of sheet piles and impact testing of H-piles.... Pile drivers would be required for construction of some project features."

Even though the EA/IS/FONSI/MND acknowledges the impacts, there appears to be no discussion of underwater noise and vibrations from the equipment use mentioned above. Using vibratory hammers and or impact hammers may result in underwater sound pressure levels to be greater than the fish mortality threshold of 180 decibels (db). The EA/IS/FONSI/MND should clearly state how underwater sound pressure levels will be monitored to ensure compliance with the 180 db threshold. CSLC staff also recommends that mitigation measures be provided for potential impacts to fish from sound waves in the event levels exceed the 180 db threshold.

6. Invasive Species. The EA/IS/FONSI/MND should consider the Project's potential to encourage the establishment or proliferation of aquatic invasive species such as the quagga mussel, or other nonindigenous, invasive species and identify avoidance or minimization measures as appropriate.

SLC-7

In addition, although the EA/IS/FONSI/MND on page 2-12 (June 2012) lists construction equipment and required personnel, awareness training doesn't appear to be mandated for the construction crew. Such training should address invasive aquatic plant and animal species, because introduced invasive species at the Project site may affect surrounding Public Trust lands and could degrade Public Trust uses, resources and values. Therefore, CSLC staff recommends the following:

- o The EA/IS/FONSI/MND should require implementation of plans that include the following provisions:
 - Environmental training of operational and maintenance personnel to inform them about invasive species;
 - Actions to be taken to prevent the release and spread of aquatic and/or terrestrial invasive species;
 - Procedures for the safe removal and disposal of any invasive species observed;
 - A post-operations and maintenance report identifying what, if any, invasive species were found attached to and/or removed from equipment and materials, as well as the treatment, handling, and disposal of identified invasive species.

Water Quality and Toxicology

SLC-8

7. The EA/IS/FONSI/MND proposes activities such as demolition, pile driving, and construction activities, which can stir up soil at the bottom of the SJR resulting in release of toxins such as mercury and methylmercury into waterways, which may result in further impacting downstream resources. However, the "Hazardous Materials and Public Health Hazards" section on page 3-89 (June 2012) of the EA/IS/FONSI/MND does not appear to evaluate Project for above mentioned sediment releases. CSLC staff recommends including evaluations of such toxins and implementation of avoidance and minimization measures to reduce potential release of toxins from all Project activities.

On April 22, 2010, the Central Valley Regional Water Quality Control Board (RWQCB) identified the CSLC as both a State agency that manages open water areas in the Sacramento-San Joaquin Delta Estuary (Estuary) and a nonpoint source discharger of methylmercury, because subsurface lands under the CSLC's jurisdiction are impacted by mercury from legacy mining activities dating back to California's Gold Rush (RWQCB Resolution No. R5-2010-0043). Pursuant to a RWQCB Total Maximum Daily Load (TMDL), the RWQCB is requiring the CSLC, Department of Water Resources, and Central Valley Flood Protection Board to secure adequate resources to fund studies to identify potential methylmercury control methods in the Delta and to participate in an Exposure Reduction Program. The goal of the studies is to evaluate existing control methods and evaluate options to reduce methylmercury in open waters under the CSLC's jurisdiction. Consequently, any action taken by HMRD which may result in continued mercury and methylmercury moving from upstream areas to the Estuary may affect the CSLC's efforts to comply with the RWQCB TMDL.

Cultural Resources

SLC-9

8. The EA/IS/FONSI/MND on page 3-59 (June 2012) explains that no previous known or recorded cultural resources were found through records studies because no studies were completed in this area before, except one within 0.25-mile radius. However, the EA/IS/FONSI/MND also states: "The area surrounding Sack Dam and

Chase Hurley

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June 28, 2012

a portion of the APE along Arroyo Canal are on sediments considered highly sensitive for the presence of buried archaeological resources" which indicates the possibility of finding cultural resources. Furthermore, page 3-60 (June 2012) explains that the surveys completed in late 2011 "...demonstrated that the APE is composed of floodplain deposits. During the monitoring of the test pits, it was very easy to see the effect of the floods on the soil."

CSLC staff requests that the EA/IS/FONSI/MND include a mitigation measure requiring archaeological monitoring of any disturbance to previously undisturbed areas or sediments including those currently submerged. Should any cultural resources be discovered on lands under the jurisdiction of the CSLC during Project construction, please consult with Senior Staff Counsel Pam Griggs at the contact information noted at the end of this letter.

Recreation

9. The EA/IS/FONSI/MND on page 3-119 (June 2012) states the following:

SLC-10

"Numerous recreational opportunities exist on private lands, including fishing, hunting, and other activities. Recreationists occasionally use the levees [to] take walks, walk their animals, and fish in the river; swimming is likely, and there is evidence of hunting, although this area is private property and such uses are unsanctioned. Formal and informal recreational uses of the different reaches include hiking, fishing, bird watching, canoeing, kayaking, and gold panning (Reclamation and DWR 2011)."

This section does not thoroughly evaluate the Project's development impacts to the above-mentioned possible recreational opportunities. CSLC staff requests an adequate explanation of impacts to possible recreational activities from the ongoing Project-related activities in the SJR and surrounding Project areas. Additionally, CSLC staff requests changes to the EA/IS/FONSI/MND on pages 3-119 and 3-120 (June 2012) to include additional impacts from blocked off access to existing recreational activities, or for use by the private property owners and other members of the Public. CSLC staff also requests a detailed logical explanation of impacts considered to be less than significant.

Cumulative Impacts

10. The EA/IS/FONSI/MND may benefit from a separate cumulative impacts section rather than the current brief discussions at the end of each environmental issue in Section 3.0. CSLC staff recommends adding to the EA/IS/FONSI/MND a comprehensive cumulative impacts section, which might be crucial if other projects are in the area that might add to existing cumulative impacts on resources in the SJR, surrounding area, and downstream from activities resulting in sediments released into water, vibrations and noise from Project.

SLC-11

Chase Hurley

Page 6

June 26, 2012

Thank you for the opportunity to comment on the EA/IS/FONSI/MND for the Project. As a trustee and responsible agency, we request that you consider CSLC staff's comments prior to adoption of the EA/IS/FONSI/MND.

Please send copies of future Project-related documents, including electronic copies of the Final EA/IS/FONSI/MND, CEQA Findings, and Notice of Determination when they become available, and refer questions concerning environmental review to Affa Awan, Environmental Scientist, at (916) 574-1891 or via e-mail at affa.awan@slc.ca.gov. For questions concerning archaeological or historic resources under CSLC jurisdiction, please contact Senior Staff Counsel Pam Griggs at (916) 574-1854 or via email at pamela.griggs@slc.ca.gov. For questions concerning CSLC leasing jurisdiction, please contact Grace Kato, with the Land Management Division, at (916) 574-1227, or via email at grace.kato@slc.ca.gov.

Sincerely,



Cy R. Oggins, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
G. Kato, LMD, CSLC
A. Awan, DEPM, CSLC
P. Griggs, Legal, CSLC
S. Haaf, Legal, CSLC

2.4 Comments from San Joaquin Valley Air Pollution Control District



June 27, 2012

Heather Waldrop
CH2M Hill
2525 Airpark Drive
Redding, CA 96001

Subject: Arroyo Canal Fish Screen and Sack Dam Fish Passage Project

District CEQA Reference No: 20120336

Dear Ms. Waldrop:

The San Joaquin Valley Air Pollution Control District (District) has reviewed the Draft Environmental Assessment/Initial Study (EA) for the project referenced above consisting of the replacement of Sack Dam, installation of a new fish screen structure in Arroyo Canal, and various construction activities to accommodate these new structures. The District offers the following comments:

- SJVAPCD-1 1. Based on the information provided in the EA, project specific criteria pollutant emissions are expected to fall below the District's thresholds of significance. Therefore, the District concludes that project specific criteria pollutant emissions would have a less than significant impact on air quality.
- SJVAPCD-2 2. As discussed in the EA, the project is subject to District Rule 9510 (Indirect Source Review). The U.S. Department of the Interior, Bureau of Reclamation (BOR) submitted filed an Air Impact Assessment Application (AIA) with the District for the San Joaquin River Restoration Program (ISR Project #20100109). This project constitutes one of three phases identified in that AIA. As part of the AIA process, the BOR incorporated mitigation measures into the program, specifically the use of a clean construction fleet, to further reduce project related construction emissions and impacts on air quality.
- SJVAPCD-3 3. The District recommends that a copy of the District's comments be provided to the project proponent.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
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Southern Region
34946 Flyover Court
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Tel: 661-392-5500 FAX: 661-392-5685

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District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project.

If you have any questions or require further information, please call Jessica Willis at (559) 230-5818.

Sincerely,

David Warner
Director of Permit Services

Jessica R. Willis for

Arnaud Marjollet
Permit Services Manager

DW:jw

2.5 Comments from David T. Wyatt

Bureau of Reclamation
Attn: Michelle Banonis
2800 Cottage Way, MP-170
Sacramento, CA 95825

2 July 2012

Re: Draft EA/IS and FONSI/MND Arroyo Canal Fish Screen and Sack Dam Fish Passage

Dear Ms. Banonis,

Thank you for this opportunity to comment on the above referenced draft document. I wish to provide comments regarding two sections of the Biological Resources chapter under section 2.3 Wildlife Habitat Assessment Survey. Most specifically the comments pertain to information regarding the Western Red Bat (Pg 2-28) and the California Ringtail (Pg 2-29).

Wyatt-1 The section on the Western Red Bat states that "Western red bats may forage up to 0.5-1.0 km (0.3-0.6 mi) from their day roost...". A recent study (October 2011) by Elizabeth Pierson, William Rainey, and David Wyatt found that this species foraged up to 10 km from their day roost sites (Pierson, E.D., W. E. Rainey, and D. T. Wyatt. 2011. Roosting and Foraging Habitat for the Western Red Bat (*Lasiurus blossevillii*) in the Sacramento River Valley of California. U.S. Fish and Wildlife Service, Red Bluff, CA.).

Wyatt-2 On Page 2-29 of the Wildlife Habitat Assessment Survey is a section providing information regarding the California Ringtail. The statement is provided that ringtails "are usually not found more than 1 km (0.6 mi) from permanent water." This may give the impression that permanent water is requisite for the presence of ringtails. True that permanent water does provide good ringtail habitat. However, ringtails have some unique physiology that allows their survival in extremely arid environments with very limited or non-existent permanent open water resources. Two researchers in particular have documented that ringtails will use water scarce/water absent habitats (Dr. Sergio Ticul Alvarez Castaneda and Dr. Cary Chevalier). In the case of Dr. Alvarez Castaneda, he has documented ringtails surviving very well in captivity for one year without any access to free water and only having water provided through consumed food. Dr. Chevalier conducted his M.S. thesis involving water requirements for ringtails (Chevalier, C.D. 1984. Water requirements of free-ranging and captive ringtail cats (*Bassariscus astutus*) in the Sonoran Desert. M.S. Thesis, Arizona State University, Phoenix, AZ). In my own work with ringtails, I have captured numerous ringtails far from permanent water sources.

Thank you again for this opportunity to provide comments to the draft document. My own background is that I have worked with ringtails since 1985 and continue to do ecological studies of ringtails. In addition, I have been working with bats since 1996 and have been conducting roosting and telemetry studies of the Western red bat since 2009.

Yours truly,

David T. Wyatt

David T. Wyatt, Professor (wyattd@scc.losrios.edu)
Sacramento City College, Biology Dept., 3538 Freeport Blvd., Sacramento, CA 95822

Section 3 Responses to Comments

3.1 Responses to U.S. Army Corps of Engineers Comments

USACE-1: The Proposed Action is the least environmentally damaging practicable alternative. The fish screen is designed to have a much smaller impact on Waters of the United States than a larger flat-plate fish screen. Fish passage around Sack Dam is essential to the SJRRP, and continued water delivery to HMRD must be maintained.

Section 2.0, Description of Alternatives, of the Public Draft EA/IS presents the reasonable range of alternatives evaluated in the document, including the No Action, Proposed Action, and Vertical Slot Fish Ladder and Fish Bypass System Alternative. The purpose and need for the Proposed Action, stated in Section 1.3 of the Public Draft EA/IS, limited the range of alternatives given the relatively specific direction provided in Public Law 111-11 that the Arroyo Canal be screened and that Sack Dam be modified “to ensure fish passage.” The Vertical Slot Fish Ladder and Fish Bypass System Alternative was the initially proposed project, but was modified to develop the Proposed Action, on the basis of input from the resource agencies, to improve passage for sturgeon.

In addition, Section 2.9, Alternatives Considered and Eliminated, of the Public Draft EA/IS describes two additional alternatives that were initially considered but were eliminated because of their inability to meet the purpose and need of the Proposed Action as well as very high anticipated implementation costs.

USACE-2: Reclamation is preparing a revised information letter to address USACE concerns at the Poso Canal.

USACE-3: Permits for dredging to support long-term operations and maintenance activities would be obtained as required. Sediment loading and deposition in front of the fish screen are likely to change with dynamic flow conditions related to ongoing restoration activities.

3.2 Responses to California Department of Fish and Game Comments

DFG-1: Environmental commitment TER-2 specifies the commitment to conduct preconstruction surveys for Swainson’s hawk. TER-2 has been revised to include a requested replacement ratio of 3:1 for the removal of any mature trees (see Section 4.3.1 of this Final EA/IS).

DFG-2: HMRD has met on several occasions with DFG staff and will continue to work with DFG through the 1602 permitting process to determine the appropriate course of action if burrowing owls are encountered in the project area. HMRD will submit a Burrowing Owl Relocation Plan for review and approval by DFG prior to beginning eviction activities. One-way passive relocation doors would likely be included in this plan as agreed to by DFG.

- DFG-3: Environmental commitment TER-3 in the Public Draft EA/IS states that preconstruction surveys for burrowing owls would be conducted in areas supporting potentially suitable habitat. TER-3 was revised to include the submittal of a Burrowing Owl Relocation Plan, in the event that occupied burrows exist within the project disturbance area (see Section 4.3.1 in this Final EA/IS). Additionally, as described in Section 4.0, Consultation and Coordination, of the Public Draft EA/IS, Subsection 4.2.4, California Fish and Game Code sections 1602 and 1603, HMRD has prepared and submitted a Notification of Streambed Alteration to DFG, and would comply with terms of the permit.
- Revisions to environmental commitment TER-4 in the errata incorporate the information from the commentor regarding the bird breeding season (February through mid-September). The 2-week requirement in TER-4 is more stringent than the suggested 30-day request and will more effectively enable the biologist to assess the presence of fledglings or new nests; therefore, this language will not be changed. Additionally, text has been modified in the errata to include DFG consultation and avoidance measures for listed or fully protected species as part of environmental commitment TER-4. See Section 4.3.1 of this Final EA/IS for changes to environmental commitment TER-4.
- DFG-4: As noted in Appendix G of the Public Draft EA/IS, suitable denning habitat for San Joaquin kit fox is not present in the project area. The project proponents are thus not pursuing the implementation of focused San Joaquin kit fox surveys. As noted in environmental commitment FSH-1, “A qualified biologist...would conduct preconstruction and construction monitoring activities throughout project implementation.” Text has been revised in the errata to include an additional environmental commitment (TER-7) that describes steps that would be taken if a San Joaquin kit fox or other State or federally listed species is encountered during preconstruction surveys or onsite monitoring targeting other species (see Section 4.3.1 in this Final EA/IS).
- DFG-5: Reclamation has engaged in informal consultation with USFWS in compliance with the federal Endangered Species Act. A biological assessment was submitted to USFWS that included the finding as stated in Appendix G of the Public Draft EA/IS that suitable denning habitat for San Joaquin kit fox is not present in the project area. USFWS has accepted the biological assessment, and SJKF was not discussed as a potential species of additional concern within the project area. As stated in environmental commitment TER-7 (see Section 4.3.1 of this Final EA/IS), if a State or federally listed species is documented in the project area, the appropriate agency would be notified and measures would be identified at that time to avoid, minimize, or mitigate potential impacts on the species.
- DFG-6: Dewatering the in-canal fish screen, individual bays of Sack Dam, and the transport channel/fish ladder for required maintenance activities would include implementation of an approved NMFS and DFG Fish Rescue Plan as described in environmental commitment FSH-7. Dewatering procedures specific to safeguarding fish trapped within the confines of the dewatering zone would be addressed in the Fish Rescue Plan. Project facility provisions and limitations with

respect to dewatering would be covered in the Facility Operation and Maintenance Manual.

Maintenance activities associated with the in-canal fish screen, Sack Dam, and the transport channel/fish ladder would generally be conducted during low irrigation and refuge water demand periods (generally December and January). Text has been revised in the errata to include additional information regarding the timing of maintenance activities (see Section 4.1 of this Final EA/IS).

Dewatering the in-canal fish screen for required maintenance activities would preclude operation of the transport channel/fish ladder; however, fish migration upstream and downstream of Sack Dam would be unimpeded to the extent that non-irrigation flows (such as, flood flows and Restoration Flows) support fish migration in the San Joaquin River.

To the extent required by law, HMRD would obtain an agreement with DFG for regular maintenance of the Arroyo Canal and associated structures (such as, trash rack, in-canal fish screen, and headworks), the transport channel/fish ladder, and the Sack Dam structure.

DFG-7: As noted in Section 2.4, Proposed Action/Preferred Alternative Post-Construction Operation and Maintenance Requirements, of the Public Draft EA/IS, the majority of the fish screen and dam maintenance would be conducted as necessary in December and January during the low-demand period for agricultural water deliveries, which corresponds to the non-nesting season. Some dredging may occur during the low-flow period (May through October). Environmental commitment TER-4 includes measures to protect nesting birds, which require scheduling construction during the non-nesting season and adhering to appropriate no-disturbance buffers. Maintenance activities would be scheduled to reduce impacts on special-status species, including nesting birds, to the extent possible. If required maintenance were scheduled during a period where special-status species may be present, HMRD would coordinate and comply with State and federal requirements, to reduce the potential for harm to special-status species. The text of environmental commitment TER-4 has been revised in the errata as described in the response to comment DFG-3. The original and revised language in TER-4 is consistent with the commentor's request.

DFG-8: The complete reference for the "USFWS 2011a" citation is as follows:

U.S. Fish and Wildlife Service (USFWS). 2011a. *Final §10(a)1(A), Enhancement of Species Permit Application for the Reintroduction of Central Valley Spring-Run Chinook into the San Joaquin River. Submitted by U.S. Fish and Wildlife Service in cooperation with National Marine Fisheries Service, Bureau of Reclamation, and California Department of Fish and Game.*

This citation was used because it was the best available information to determine how spring-run Chinook salmon would be reintroduced to the San Joaquin River. However, Reclamation is aware that NMFS has not issued a final determination. In the event that juvenile spring-run Chinook salmon are released upstream of the project site prior to or during construction, Reclamation would work with

USFWS, as the 10(a)(1)(A) permit holder, to coordinate study activities in such a way as to not interfere with construction actions.

DFG-9: Survey results that detect federally listed species or habitat would be submitted to USFWS as required.

3.3 Responses to California State Lands Commission Comments

- SLC-1: HMRD submitted a Land Use Lease Application to SLC in March 2012. HMRD received a response letter from SLC on August 30, 2012, stating that the project falls within Public Resources Code section 6327; and therefore, HMRD would not need to obtain a lease from SLC. Section 6327 states that SLC may grant a permit for the use of State lands “for the installation of facilities for procurement of freshwater from and construction of drainage facilities into navigable rivers,... except that if such applicant obtain the required permit for such use from the local reclamation district, the Reclamation Board,... or the Corps of Engineers of the United States Army, then such application shall not be required by the SLC.” SLC acknowledges the discrepancy between the Public Draft EA/IS SLC comment letter dated June 2012 and the SLC Land Use Lease Application response letter dated August 2012, and explains that their final assessment was reached following discussions with the project proponent that took place subsequent to their submittal of comments on the Public Draft EA/IS.
- SLC-2: Construction phasing and equipment needs are identified in Section 2.3, Proposed Action/Preferred Alternative Construction Schedule and Sequencing, of the Public Draft EA/IS. The anticipated methods of construction, which include cofferdams, are discussed in Subsection 2.3.3, In-River Construction. The construction contract documents would reference and require compliance with applicable permits and associated environmental avoidance and minimization measures. The resource area analyses in the Public Draft EA/IS consider project phases, including demolition of the existing Sack Dam. Furthermore, the minimization of potential impacts (including in-river) would occur through implementation of the environmental commitments described in Section 2.8 of the Public Draft EA/IS, which include compliance with Clean Water Act requirements, as described in Section 4.0, Consultation and Coordination, of the Public Draft EA/IS.
- SLC-3: Refer to Section 2.3, Proposed Action/Preferred Alternative Construction Schedule and Sequencing, of the Public Draft EA/IS and subsequent subsections for a comprehensive description of the proposed methods and timing of the removal of the existing Sack Dam. The Proposed Action would not create an increase to water diversions currently occurring from the San Joaquin River. The new Sack Dam would be designed to accommodate HMRD’s historical contracted diversion amount. The Proposed Action is being undertaken to provide fish passage and operational flexibility while ensuring continued irrigation to agricultural lands and refuge water diversions via gravity diversion.

SLC-4: The format of the Public Draft EA/IS document fully satisfies both NEPA and CEQA requirements. Each resource area section was formatted to include an environmental setting discussion (described in the document as “Affected Environment”) that provides the physical environmental conditions near the Proposed Action and an environmental impacts discussion (described in the document as “Environmental Consequences”) that provides the anticipated impacts that would result from construction and operation of the Proposed Action. Within the Environmental Consequences portion of each resource section, significance criteria (also known as thresholds of significance) are presented. In most cases, the significance criteria were based on Appendix G of the CEQA guidelines. Following the significance criteria, each resource area also includes an assessment method discussion that provides a clear and logical discussion on how impacts associated with each resource area were determined. Following the assessment method discussion, potential impacts resulting from the No Action Alternative and construction and operational impacts resulting from both the Proposed Action and Vertical Slot Fish Ladder and Fish Bypass System Alternative are provided. Each potential impact is evaluated and disclosed. Additionally, succinct descriptions of the anticipated level of significance are included at the end of each impact discussion, with the anticipated level of impact shown in bolded, italicized font.

SLC-5: Section 2.8, Environmental Commitments, of the Public Draft EA/IS lists the proposed measures or practices committed to by the project proponent as part of the Proposed Action to reduce or avoid potentially significant impacts. These commitments are synonymous with mitigation measures under CEQA, and are included as part of the project description. For example, as described in environmental commitment VEG-1 (page 2-23 of the Public Draft EA/IS), a restoration plan would be developed for disturbed portions of the SJR floodplain within the study area. The restoration plan would include bank revetment with embedded tree and brush clusters, and riparian restoration. Bank revetment would mitigate the effects of removing riparian habitat by increasing smaller in-stream woody material, creating a larger amount of juvenile rearing habitat than current pre-project levels. The bank revetment would mitigate the temporary loss of Shaded Riverine Aquatic habitat. Additionally, as described under Impact FSH-5 on page 3-30 of the Public Draft EA/IS, the loss of Shaded Riverine Aquatic cover would be negligible because of the low quality of existing nearshore habitat and the lack of significant in-stream and overhead cover in the study area.

Additionally, as indicated in Section 4.0, Consultation and Coordination, of the Draft EA/IS, Reclamation is currently consulting with NMFS regarding potential impacts on fish species under Section 7 of the federal Endangered Species Act. There are no fish species present at the project site that require consultation with DFG under the California Endangered Species Act; thus, an incidental take permit is not required for fish species. However, HMRD is in the process of obtaining an incidental take permit for other special-status species potentially occurring on the project site.

- SLC-6: Impact NOI-1 on page 3-108 of the Public Draft EA/IS discusses noise and vibration in relation to sensitive receptors in the general project area. Impact FSH-3 on page 3-28 discusses impacts of pile driving on fish. Environmental commitment FSH-7 and FSH-8 provide avoidance and minimization measures that would be implemented to reduce impacts associated with pile driving. As stated in environmental commitment FSH-7, “A cofferdam would be installed around the in-channel construction area...” By implementing this measure, impacts from pile driving would be less than significant.
- In response to SLC’s comment, impact discussion NOI-1 on page 3-108 of the Public Draft EA/IS has been modified in the errata to include a reference to impact discussion FSH-3 on page 3-28 of the Draft EA/IS (see Section 4.4.1 of this Final EA/IS).
- SLC-7: The Proposed Action would not encourage the establishment or proliferation of aquatic invasive species such as the quagga mussel. All construction equipment required to enter into the SJR channel would be isolated to the SJR channel and adjacent areas during the period of construction. Construction activities would not require the movement of equipment from other water bodies; therefore, there is little to no potential for the introduction of these or other invasive species into the SJR. Reclamation has conducted ongoing investigations to determine the presence of invasive aquatic species. Reclamation would determine if additional investigation is needed based on known conditions and information obtained from further assessment activities to evaluate the infestation risk of dreissenid mussels in Reach 3 of SJR. Additionally, as stated in environmental commitment WR-1 of the Public Draft EA/IS, “The lead agencies would obtain Section 404, Section 401, and Section 1602 permits and comply with permit terms.” By implementing this environmental commitment, the Proposed Action’s potential to encourage the establishment or proliferation of aquatic invasive species would be avoided or minimized.
- SLC-8: Section 3.20, Water Resources, of the Public Draft EA/IS addresses water quality within the SJR. Impacts WR-1 and WR-4 provide an evaluation of potential impacts on water quality as a result of both construction and operation of the Proposed Action. Environmental commitments WR-1 and WR-2 as provided in Section 2.8.20 of the Public Draft EA/IS, specifically address reducing potential impacts on water quality by requiring the compliance with Sections 404 and 401 of the Clean Water Act, and Section 1602 of DFG code. Additional water quality measures are included in environmental commitment GEO-1, “To minimize the potential release of fine sediment originating from earthmoving activities during project construction, including potential soil loss induced by streambank erosion into surface waters, an SWPPP would be prepared and implemented during project construction.” Therefore, although mercury and methylmercury are not specifically discussed in the Public Draft EA/IS, measures to reduce the potential release of water contaminants, including these toxins, are included as part of the Proposed Action.
- SLC-9: Measures that would be implemented as part of the Proposed Action to avoid or minimize potential environmental impacts are described in Section 2.8 of the

Public Draft EA/IS. These measures were included as part of the Proposed Action as “environmental commitments.” Environmental commitments CUL-1 and CUL-2, found on pages 2-23 and 2-24 of the Public Draft EA/IS, would require archaeological surveys prior to initiating ground-disturbing activities as well as monitoring on any previously unexamined areas that have the potential to be affected by project construction, and provide notification requirements if archaeological resources are inadvertently discovered during construction, and ensure compliance with the National Historic Preservation Act (NHPA) Section 106 process. Furthermore, environmental commitment CUL-4 on page 2-24 of the Public Draft EA/IS requires that prior to initiating construction activities, the NHPA Section 106 process be completed, which may include additional studies, and/or monitoring, avoidance measures, or the execution of a Memorandum of Agreement to resolve adverse effects as outlined in the NHPA Section 106 regulations at 36 Code of Federal Regulations Part 800.6.

Additionally, at the time of this writing, the determination regarding SLC’s jurisdiction over the project site was pending. However, in response to SLC’s request to consult with Senior Staff Counsel Pam Griggs upon the discovery of any cultural resources on lands under SLC’s jurisdiction, environmental commitment CUL-2 has been revised to include this notification. See Section 4, Errata, of this Final EA/IS, for revisions to environmental commitment CUL-2.

SLC-10: As stated on page 3-119 of the Public Draft EA/IS, “Although the project study area can be accessed by county roads, the private property owners preclude public access to the area. The study area does not have any publically available recreational opportunities.”

Similar to the existing Arroyo Canal and Sack Dam, the project facilities would not block access to existing recreational activities, nor would the facilities preclude the use of SJR and other recreational opportunities to adjacent private property owners and other members of the public.

SLC-11: As written, the Public Draft EA/IS satisfies the requirements of the NEPA and CEQA processes, and provides sufficient discussion of cumulative impacts for each resource area.

3.4 Responses to San Joaquin Valley Air Pollution Control District Comments

SJVAPCD-1: Comment noted. No response is necessary.

SJVAPCD-2: Comment noted. No response is necessary.

SJVAPCD-3: Copies of the SJVAPCD’s comments were provided to all project proponents.

3.5 Responses to David T. Wyatt Comments

Wyatt-1: Text has been revised in the errata on the basis of the commentor’s suggestion. Section 2.3.2 of the *Field Survey Methods and Results Technical Memorandum*

(Public Draft EA/IS Appendix E) has been updated to reflect the new information about the foraging distance of the western red bat. This revision did not change the effects analysis or anticipated impact of the Proposed Action.

Wyatt-2: Text has been revised in the errata on the basis of the commentor's suggestion. Section 2.3.2 of the *Field Survey Methods and Results Technical Memorandum* (Public Draft EA/IS Appendix E) has been updated to remove language regarding the association of California ringtail with permanent sources of water. This revision did not change the effects analysis or anticipated impact of the Proposed Action.

Section 4 Errata

This section of the Final EA/IS contains revisions to the Public Draft EA/IS that were identified through review and responses to comments. The revisions are one component of the materials that comprise the Final EA/IS. This errata sheet identifies certain modifications and corrections to the Public Draft EA/IS that have been identified in response to public and agency comments received during the public review and comment period. The changes presented below provide additional clarification, additional information, and/or correct minor errors. The changes do not alter the conclusions related to environmental impacts that were presented in the Draft EA/IS. Additions to the Draft EA/IS are indicated with double underlined text, and deletions are indicated in ~~strikethrough~~.

4.1 Section 2.3, Proposed Action/Preferred Alternative Construction Schedule and Sequencing

Figure 2-2. Construction Sequencing

Figure 2-2 incorrectly shows the “Area not to be disturbed” along the north side of the levee. Figure 2-2 has been replaced (see below).

4.2 Section 2.4, Proposed Action/Preferred Alternative Post-Construction Operation and Maintenance Requirements

Page 2-13, second paragraph, the following underlined text has been added:

Maintenance of the fish screen and dam for the Proposed Action/Preferred Alternative would include removing sediment and debris in SJR (immediately upstream of Sack Dam), the Arroyo Canal approach channel, the concrete canal, and around the fish screen structure. This maintenance would generally be conducted as necessary in December and January during the low-demand period for agricultural water deliveries and, as required, during other seasonal time periods to ensure continued performance of project facilities. Dredged material would be placed in approved areas to ensure that material does not re-enter the river.

4.3 Section 2.8, Environmental Commitments

4.3.1 Section 2.8.4, Biological Resources – Terrestrial Species

FSH-7: Page 2-18, first complete bullet, the following text has been removed:

- A cofferdam would be installed around the in-channel construction area, which would be dewatered before additional pile-driving and construction activities. Fish would not have access to the construction site, and underwater sounds produced by pile driving would be attenuated. ~~The number and size of piles would be limited to the minimum necessary to meet the engineering and design requirements of the Proposed Action.~~

4.3.2 Section 2.8.4, Biological Resources – Terrestrial Species

TER-2: Page 2-20, sixth complete bullet, the following underlined text has been added:

- If breeding Swainson's hawks (i.e., those exhibiting nest building or nesting behavior) are identified, a qualified biologist would be stationed near the nest to observe nesting and report any abandonment behavior to DFG as work continues. All reasonable efforts would be made to avoid mature trees. If the Proposed Action results in the removal of any mature nesting trees, appropriate native tree species would be planted at a 3:1 ratio in a permanently protected area.

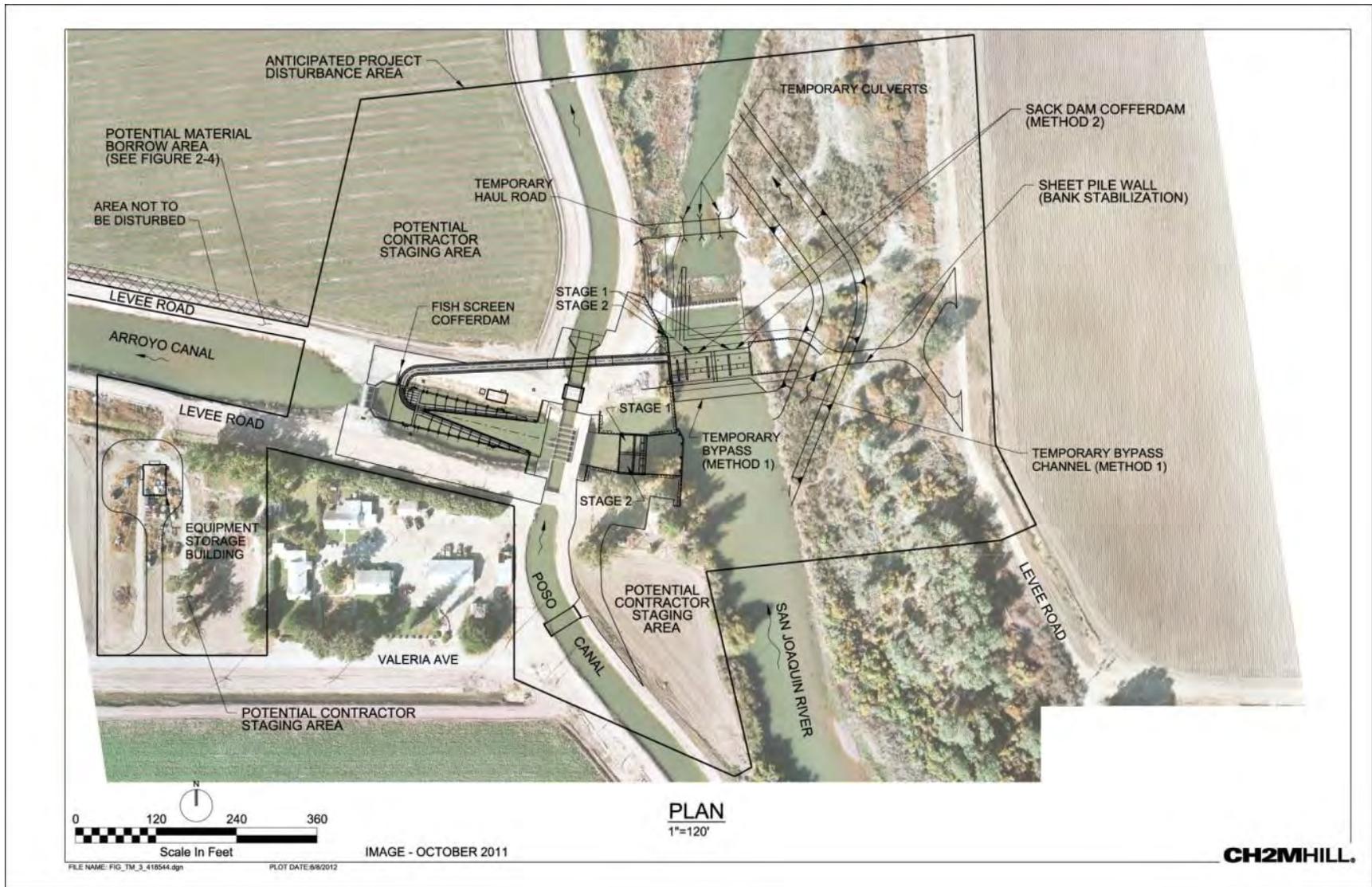


Figure 2-2.
Construction Sequencing

TER-3: Page 2-20, first complete bullet under TER-3, the following indicated text has been removed:

- Preconstruction surveys for burrowing owls would be conducted in areas supporting potentially suitable habitat within 14 days prior to the start of project construction and again within 24 hours prior to construction, using methods identified in the *Staff Report on Burrowing Owl Mitigation* (DFG 2012a). If ground-disturbing activities are delayed or suspended for more than 2 days after the initial or previous survey, the suitable habitat would be resurveyed. ~~If occupied burrows are documented during preconstruction surveys, buffers would be established by a qualified biologist in coordination with DFG based on the recommended guidelines identified in the *Staff Report on Burrowing Owl Mitigation* (DFG 2012a) for activities that occur during the breeding and non-breeding season to protect reproductive and resident owls. Buffer size would range from 50 to 500 meters, depending on the level of disturbance and time of year. The level of disturbance, as defined in Environment Canada (2009), is anticipated to range from medium to high depending on timing and location of project activities, and would be verified with DFG prior to establishing buffers. Ground-disturbing activities would not occur within the buffers.~~

TER-3: Page 2-21, first complete bullet, the following underlined text has been added and the indicated text removed:

- If occupied burrows are documented and ~~the~~ recommended buffer distances cannot be adequately incorporated, HMRD would submit a Burrowing Owl Relocation Plan, as recommended by DFG, for review and approval. ~~the monitoring biologist would contact DFG and develop a plan to install one-way exit doors on the burrows to allow safe exit from the work site.~~

TER-4: Page 2-21, first, second, and third complete bullets under TER-4, the following underlined text has been added and the indicated text removed:

- Tree and vegetation removal is scheduled to occur in January, prior to the nesting season. Clearing and grubbing activities are anticipated to remove most or all potential nesting areas prior to the nesting season with the exception of trees containing known raptor nests. Tree or vegetation removal activities would be avoided to the extent practicable during the nesting season for migratory birds (from February 1 to ~~September 1~~ mid-September). This date was revised to be consistent with DFG/1600 comments.
- If tree or vegetation removal or other construction activities are to occur during the nesting season, a qualified biologist would conduct a preconstruction survey within the construction area to determine the presence and absence of nesting birds. At least one survey would be conducted no more than 2 weeks prior to the onset of any construction activity. If no active nests are located, no further mitigation is necessary.
- If active nests (nests containing eggs or young), including those of a listed or fully protected species, are identified within the survey area, a no disturbance buffer zone would be established around the nest site. The width of the buffer zone would be determined by a qualified biologist in coordination with USFWS and DFG. No construction activities would occur within the buffer zone. The buffer zone would be

maintained until the young have fledged (as determined by a qualified biologist). The buffer zone would be delineated with exclusionary fencing and flagging and/or signage as appropriate.

TER-5: Page 2-22, the following text has been removed:

- **TER-5** – To avoid ~~and/or minimize~~ effects on white-tailed kite (a California fully protected species):

TER-7: Page 2-22, a new environmental commitment, TER-7, has been added as follows:

- **TER-7** – If a State or federally listed species is observed during preconstruction or onsite monitoring being conducted for other species (e.g., TER-3, TER-4), DFG and/or USFWS would be notified, and measures would be identified at that time to avoid, minimize, or mitigate potential impacts on the species.

4.3.3 Section 2.8.6, Cultural Resources

CUL-2: Page 2-24, first complete bullet, the following underlined text has been added:

- **CUL-2** – If archaeological resources are inadvertently discovered during earthmoving activities, the construction crew would immediately cease work near the find (recommended 100-foot radius, no less than 50-foot radius from location of discovery), and Reclamation’s Mid-Pacific Regional Archaeologist would be called and consulted on how to proceed in accordance with regulations at 36 CFR 800.13. If archaeological resources are inadvertently discovered on lands under the jurisdiction of the California State Lands Commission, the Senior Staff Counsel of the California State Lands Commission would also be consulted. If additional measures to ensure avoidance of potential buried archaeological resources result from Reclamation’s consultation with the State Historic Preservation Officer (SHPO) under Section 106, they would be determined in coordination with the SHPO during the Section 106 consultation process prior to implementation of the Proposed Action.

4.4 Section 3.3, Biological Resources – Fish Species

4.4.1 Section 3.3.1, Environmental Setting

The following underlined text has been added and the indicated text removed in the reference citation in Table 3.3-1, Note 2:

Although there is some recent evidence that white sturgeon occur in the SJR, no current or historical records confirm green sturgeon use of this drainage (NMFS ~~2005a~~2005).

4.4.2 Section 3.3.2, Environmental Consequences

The following indicated text has been removed in the reference citation in Impact FHS-8, line 460:

Furthermore, USFWS (2011~~a~~) has identified that...

4.5 Section 3.9, Growth Inducing

4.5.1 Section 3.9.2, Environmental Consequences

The following underlined text has been added and the indicated text removed in the reference citation on page 3-77 under the *Proposed Action* subheading, 1st paragraph, line 39:

(California Development Department [EDD] 2011~~a~~,~~b~~, d)

4.6 Section 3.10, Global Climate Change

4.6.1 Section 3.10.1, Environmental Setting

The following underlined text has been added and the indicated text removed in the reference citation on page 3-79 under the *Principle Greenhouse Gas* subheading, 2nd paragraph, line 33:

...cattle, fuel combustion, and mining coal (~~NMFS 2005b~~NOAA, 2005).

4.6.2 Section 3.10.2, Environmental Consequences

The following underlined text has been added and the indicated text removed in the reference citation on page 3-85 under the *Assessment Method* subheading, 1st bullet on page 3-85, line 249:

...GHG emissions account for the remaining 5 percent (USEPA 2011~~a~~c).

4.7 Section 3.14, Noise

4.7.1 Section 3.14.2, Environmental Consequences

Impact NOI-1, Page 3-108, first complete paragraph under Proposed Action, the following underlined text has been added:

Impact NOI-1: Exposure of sensitive receptors to temporary short-term construction noise. Construction of the Proposed Action would include the use of heavy equipment which would likely expose nearby sensitive receptors to noise levels in excess existing ambient noise levels. The most noticeable construction noise would likely be related to vehicle backup warning devices and general construction noise. The site preparation phase typically generates the highest noise levels, which are caused by onsite equipment associated with grading, compacting, and excavation, as well as vibratory hammers and/or impact hammers during installation of sheet piles and impact testing of H-piles. Site preparation equipment could include backhoes, bulldozers, loaders, excavation equipment such as graders and scrapers, and compaction equipment. Erection of large structural elements and mechanical systems could require the use of a crane for placement and assembly tasks, which could also generate high noise levels. Pile drivers would be required for construction of some project features. Exposure of fish species to underwater noise and vibration during construction is discussed on page 3-28.

4.8 Section 6.0, Literature Cited

The following underlined text has been added and the indicated text removed in the following references:

California Department of Conservation (CDC) Division of Mines and Geology. 2000. A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos. <ftp://ftp.consrv.ca.gov/pub/oil/maps/dist5/507/Map507.pdf>. Open File Report 200-19. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf. Accessed December 21, 2011.

~~----- 2005a~~2005. Green Sturgeon (*Acipenser medirostris*) Status Review Update. Biological Review Team. Santa Cruz Laboratory Southwest Fisheries Science Center. NOAA Fisheries. February. <http://swfsc.noaa.gov/publications/FED/00995.pdf>.

~~----- 2005b~~. National Oceanic and Atmospheric Administration (NOAA). 2005. Greenhouse Gases: Frequently Asked Questions. <http://lwf.ncdc.noaa.gov/oa/climate/gases.html>. Accessed September 22, 2009.

The following reference has been removed:

~~U.S. Environmental Protection Agency (USEPA). 2011a. Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle. <http://www.epa.gov/oms/climate/420f05004.htm>. Accessed August 2, 2011.~~

The following references have been added:

California Department of Conservation (CDC) Division of Oil, Gas, and Geothermal Resources. 2011. Map 507: Ash Slough, Merrill Avenue, Moffat Ranch. <ftp://ftp.consrv.ca.gov/pub/oil/maps/dist5/507/Map507.pdf>. Accessed December 21, 2011.

Friant Water Users Authority (FWUA) and Natural Resources Defense Council (NRDC). 2002. San Joaquin Restoration Study Background Report. Appendix B - Native and Introduced Fishes of the San Joaquin River. Summary of Distribution Life History, and Habitat Requirements.

Popper, A. N., T. J. Carlson, A. D. Hawkins, B. L. Southall, and R. L. Gentry. 2006. Interim Criteria for Injury of Fish Exposed to Pile Driving Operations: A White Paper. May.

USFWS. 2011. Final §10(a)1(A), Enhancement of Species Permit Application for the Reintroduction of Central Valley Spring-Run Chinook into the San Joaquin River. Issued December 2011.

4.9 Appendix E

4.9.1 Section 2.3.2, Results

Western Red Bat: Page 2-28, third complete paragraph, the following underlined text has been added and the indicated text removed:

Western red bat (*Lasiurus blossevillii*) is a California SSC. In California, western red bats have been observed near the Pacific Coast, Central Valley, and the Sierra Nevada. Usually found at lower elevations, recent acoustic surveys in California have documented that western red bats, while relatively rare, are broadly distributed up to 2,500 m (8,202 ft) in the Sierra Nevada (Pierson et al. 2000, 2001; Pierson and Rainey 2003). Western red bat roosts have often been observed in edge habitats—near streams, fields, orchards, or urban areas (Zeiner et al. 1990b). This species roosts non-colonially in dense canopies and within tree foliage, beneath overhanging leaves (Constantine 1959, Shump and Shump 1982), from 0.6 to 12 m (2 to 40 ft) above ground level (Zeiner et al. 1990b). Studies in the Central Valley found that summering populations of western red bats are substantially more abundant in remnant riparian stands of cottonwood or sycamore greater than 50 m (164 ft) wide than in younger, less extensive stands (Pierson et al. 2000). Western red bats may forage up to ~~0.5–1.0 km (0.3–0.6 mi)~~10 km (6.2 mi) from their day roost (~~Zeiner 1990b~~Pierson et al. 2011), at both canopy height and low over the ground (Shump and Shump 1982). This species feeds primarily on small moths, but its diet may include a variety of other insects such as crickets, beetles, and cicadas (Zeiner et al. 1990b).

California Ringtail: Page 2-29, second complete paragraph, the following indicated text has been removed:

California Ringtail

California ringtail (*Bassariscus astutus*), a nocturnal carnivore in the raccoon family, is a California FP species. Ringtails are active year-long and widely distributed throughout California as a non-migratory resident, ranging over the entire State with the exception of the extreme northeast corner and the southern portions of the San Joaquin Valley (Orloff 1988). The highly developed agricultural portions of the San Joaquin Valley are considered unsuitable for ringtail (Orloff 1988). Little is known about the specific habitat requirements of California ringtails; they are found in a variety of environments including riparian, shrub, and forest in close association with rocky areas or riparian habitats (Jameson and Peeters 2004), ~~and are usually not found more than 1 km (0.6 mi) from permanent water.~~ Dens may be located in rock crevices, tree cavities, logs, snags, abandoned burrows, or woodrat nests (Zeiner et al. 1990b). The mating season occurs from February to May, and young are born around May and June (Zeiner et al. 1990b). Ringtails eat mainly rodents (woodrats and mice) and rabbits, although they also forage on fruits, berries, nuts, birds, reptiles, and invertebrates (Zeiner et al. 1990b, Jameson and Peeters 2004).

4.9.2 Section 4.0, Literature Cited

Section 4.0, Literature Cited: Page 4-6, the following underlined text has been added:

Pierson, E.D., W.E. Rainey, and D.T. Wyatt. 2011. *Roosting and Foraging Habitat for the Western Red Bat (Lasiurus blossevillii) in the Sacramento River Valley of California.* U.S. Fish and Wildlife Service, Red Bluff, California.